NEUROSCIENCE

An International Journal under the editorial direction of IBRO

Volume 76, ~~1996~~
1997

TITLE SECTION,
LIST OF CONTENTS,
AUTHOR AND KEY WORD INDEX

UNIVERSITY OF HAWAII
FEB 2 7 1997
LIBRARIES

PERGAMON

P
r1
43

NEUROSCIENCE

Chief Editors

P. G. KOSTYUK: *Department of General Physiology, A. A. Bogomoletz Institute of Physiology, Academy of Sciences, 4 Bogomoletz Street, Kiev* 24, 252601 *GSP, Ukraine*

R. LLINÁS: *Department of Physiology and Biophysics, New York University School of Medicine,* 550 *First Avenue, New York* 10016, *U.S.A.*

A. D. SMITH: *Department of Pharmacology, University of Oxford, Mansfield Road, Oxford OX*1 3*QT, U.K.*

Editorial Board

T. ARENDT (*Leipzig*)
G. ASTON-JONES (*Philadelphia, PA*)
G. BERNARDI (*Rome*)
A. BJORKLUND (*Lund*)
A. BLIGHT (*Chapel Hill, NA*)
T. V. P. BLISS (*London*)
J. P. BOLAM (*Oxford*)
M. C. BROWN (*Oxford*)
J. BUREŠ (*Prague*)
G. BUZSÁKI (*Newark, NJ*)
A. L. BYSOV (*Moscow*)
C. CAVADA (*Madrid*)
D. W. CHOI (*St Louis, MO*)
A. CONSTANTI (*London*)
M. COSTA (*Adelaide*)
J. T. COYLE (*Belmont, MA*)
W. CRILL (*Seattle, WA*)
A. C. CUELLO (*Montreal*)
L. DELLA CORTE (*Firenze*)
A. C. DOLPHIN (*London*)
F. E. DUDEK (*Fort Collins, CO*)
A. W. DUGGAN (*Edinburgh*)
D. EDGAR (*Liverpool*)
M. M. ESIRI (*Oxford*)
R. H. EVANS (*Bristol*)
D. S. FABER (*Philadelphia, PA*)
V. V. FANARDJIAN (*Yerevan*)
R. L. M. FAULL (*Auckland*)
R. FISCHER-COLBRIE (*Innsbruck*)
T. F. FREUND (*Budapest*)
G. GABELLA (*London*)
F. H. GAGE (*La Jolla, CA*)
J. GARTHWAITE (*London*)
C. R. GERFEN (*Bethesda, MD*)
H. M. GERSCHENFELD (*Paris*)
J. GLOWINSKI (*Paris*)
J. A. GRAY (*London*)
A. M. GRAYBIEL (*Cambridge, MA*)
H. J. GROENEWEGEN (*Amsterdam*)
R. W. GUILLERY (*Madison, WI*)
M. J. GUTNICK (*Beersheva*)
M. HAMON (*Paris*)
F. F. HEFTI (*Harlow*)
L. HEIMER (*Charlottesville, VA*)
Z. HENDERSON (*Leeds*)
J. HERBERT (*Cambridge*)
M. HERKENHAM (*Bethesda, MD*)
D. E. HILLMAN (*New York, NY*)
T. HÖKFELT (*Stockholm*)
P. HOLZER (*Graz*)
O. HORNYKIEWICZ (*Vienna*)
J. HOUNSGAARD (*Copenhagen*)
S. P. HUNT (*Cambridge*)
H. JAHNSEN (*Copenhagen*)
B. E. JONES (*Montreal*)
E. G. JONES (*Irvine, CA*)
G. JU (*Xi'an*)
J. S. KELLY (*Edinburgh*)
B. I. KHODOROV (*Moscow*)
S. T. KITAI (*Memphis, TN*)
T. KOSAKA (*Fukuoka*)
O. A. KRISHTAL (*Kiev*)
S. N. LAWSON (*Bristol*)
J. D. LEVINE (*San Francisco, CA*)
D. LINDHOLM (*Munich*)
C. A. MAGGI (*Florence*)
C. A. MARSDEN (*Nottingham*)
A. I. MATUS (*Basle*)
J. F. MORRIS (*Oxford*)
É. MUGNAINI (*Chicago, IL*)
D. G. NICHOLLS (*Dundee*)
T. ONO (*Toyama*)
O. P. OTTERSEN (*Oslo*)
J. M. PALACIOS (*Barcelona*)
V. H. PERRY (*Oxford*)
J. POLLOCK (*London*)
P. RAKIC (*New Haven, CA*)
H. J. RALSTON (*San Francisco, CA*)
S. J. REDMAN (*Canberra*)
T. S. REESE (*Bethesda, MD*)
L. P. RENAUD (*Ottawa*)
H. A. ROBERTSON (*Halifax, N.S.*)
R. A. RUSH (*Adelaide*)
R. SCHMIDT-KASTNER (*Miami, FL*)
M. L. SHIK (*Moscow*)
S. SNYDER (*Baltimore, MD*)
M. V. SOFRONIEW (*Cambridge*)
P. SOMOGYI (*Oxford*)
C. SOTELO (*Paris*)
K. STARKE (*Freiburg*)
M. S. STARR (*London*)
M. STERIADE (*Quebec*)
P. STRATA (*Turin*)
K. SUZUKI (*Chapel Hill, NC*)
D. T. THEODOSIS (*Bordeaux*)
A. M. THOMSON (*London*)
K. UNSICKER (*Heidelberg*)
S. R. VINCENT (*Vancouver*)
J. VOOGD (*Rotterdam*)
L. VYKLICKY (*Prague*)
K. D. WALTON (*New York, NY*)
X. S. T. WAN (*Beijing*)
K. WICTORIN (*Lund*)
W. D. WILLIS (*Galveston, TX*)
H. WINKLER (*Innsbruck*)
W. WISDEN (*Cambridge*)
D. J. WOODWARD (*Winston-Salem, NC*)
Y. YAROM (*Jerusalem*)
D. S. ZAHM (*St Louis, MO*)
R. E. ZIGMOND (*Cleveland, OH*)
H. ZIMMERMANN (*Frankfurt*)

IBRO Publications Committee

Chairman, G. W. KREUTZBERG; C. BLAKEMORE, G. K. KOSTOPOULOS, A. D. SMITH, P. G. STRATA

Production Editor: M. DAVIES (e-mail: m.davies@elsevier.co.uk). *Editorial Assistant*: S. J. RUSSELL (*Oxford*)

Copyright © 1996 IBRO

LIST OF CONTENTS

VOLUME 76 NUMBER 1

	Instructions to Authors	v
LETTERS TO NEUROSCIENCE		
P. O'Donnell and **A. A. Grace**	Cortical afferents modulate striatal gap junction permeability via nitric oxide	1
W. Xu and **P. C. Emson**	Neuronal stem cells express vesicular monoamine transporter 2 immunoreactivity in the adult rat	7
RESEARCH PAPERS		
D. Contreras and **M. Steriade**	Synchronization of low-frequency rhythms in corticothalamic networks	11
D. Contreras and **M. Steriade**	State-dependent fluctuations of low-frequency rhythms in corticothalamic networks	25
A. A. Eblen-Zajjur and **J. Sandkühler**	Synchronicity of nociceptive and non-nociceptive adjacent neurons in the spinal dorsal horn of the rat: stimulus-induced plasticity	39
C. O'Connell, A. O'Malley and **C. M. Regan**	Transient, learning-induced ultrastructural change in spatially-clustered dentate granule cells of the adult rat hippocampus	55
E. A. van der Zee, B. Roozendaal, B. Bohus, J. M. Koolhaas and **P. G. M. Luiten**	Muscarinic acetylcholine receptor immunoreactivity in the amygdala—I. Cellular distribution correlated with fear-induced behavior	63
B. Roozendaal, E. A. van der Zee, R. A. Hensbroek, H. Maat, P. G. M. Luiten, J. M. Koolhaas and **B. Bohus**	Muscarinic acetylcholine receptor immunoreactivity in the amygdala—II. Fear-induced plasticity	75
S. M. Knoblach and **M. J. Kubek**	Increases in thyrotropin-releasing hormone messenger RNA expression induced by a model of human temporal lobe epilepsy: effect of partial and complete kindling	85
S. M. Knoblach and **M. J. Kubek**	Changes in thyrotropin-releasing hormone levels in hippocampal subregions induced by a model of human temporal lobe epilepsy: effect of partial and complete kindling	97
E. Morishita, S. Masuda, M. Nagao, Y. Yasuda and **R. Sasaki**	Erythropoietin receptor is expressed in rat hippocampal and cerebral cortical neurons, and erythropoietin prevents *in vitro* glutamate-induced neuronal death	105
A. M. Fernandez, J. Garcia-Estrada, L. M. Garcia-Segura and **I. Torres-Aleman**	Insulin-like growth factor I modulates c-*fos* induction and astrocytosis in response to neurotoxic insult	117
C. Grothe, C. Meisinger, A. Hertenstein, H. Kurz and **K. Wewetzer**	Expression of fibroblast growth factor-2 and fibroblast growth factor receptor 1 messenger RNAs in spinal ganglia and sciatic nerve: regulation after peripheral nerve lesion	123
F. Gómez-Pinilla, S. Miller, J. Choi and **C. W. Cotman**	Heparan sulfate potentiates the autocrine action of basic fibroblast growth factor in astrocytes: an *in vivo* and *in vitro* study	137
I. E. Mazzoni and **R. L. Kenigsberg**	Microglia from the developing rat medial septal area can affect cholinergic and GABAergic neuronal differentiation *in vitro*	147
S. Fulle, M. A. Mariggiò, S. Belia, I. Nicoletti and **G. Fanò**	Nerve growth factor inhibits apoptosis induced by S-100 binding in neuronal PC12 cells	159

32 341HI 1996
XL
6/97 31249-200 NULD

G. H. K. Tjon, P. Voorn, L. J. M. J. Vanderschuren, T. J. de Vries, N. H. L. M. Michiels, A. J. Jonker, H. Klop, P. Nestby, A. H. Mulder and **A. N. M. Schoffelmeer**	Delayed occurrence of enhanced striatal preprodynorphin gene expression in behaviorally sensitized rats: differential long-term effects of intermittent and chronic morphine administration	167
C. A. Chapman, J. S. Yeomans, C. D. Blaha and **J. R. Blackburn**	Increased striatal dopamine efflux follows scopolamine administered systemically or to the tegmental pedunculopontine nucleus	177
C. M. Patanow, J. R. Day and **M. L. Billingsley**	Alterations in hippocampal expression of SNAP-25, GAP-43, stannin and glial fibrillary acidic protein following mechanical and trimethyltin-induced injury in the rat	187
F. René, P. Poisbeau, C. Egles, R. Schlichter and **J. M. Félix**	Co-culture of hypothalamic neurons and melanotrope cells: a model to study synaptogenesis between central neurons and endocrine cells	203
D. R. Gehlert and **S. L. Gackenheimer**	Differential distribution of neuropeptide Y Y1 and Y2 receptors in rat and guinea-pig brains	215
M. Schindler, L. A. Sellers, P. P. A. Humphrey and **P. C. Emson**	Immunohistochemical localization of the somatostatin $SST_{2(A)}$ receptor in the rat brain and spinal cord	225
U. H. Winzer-Serhan, H. K. Raymon, R. S. Broide, Y. Chen and **F. M. Leslie**	Expression of α_2 adrenoceptors during rat brain development—I. α_{2A} messenger RNA expression	241
U. H. Winzer-Serhan, H. K. Raymon, R. S. Broide, Y. Chen and **F. M. Leslie**	Expression of α_2 adrenoceptors during rat brain development—II. α_{2C} messenger RNA expression and [^{3}H]rauwolscine binding	261
H.-G. Schaible, A. Ebersberger, P. Peppel, U. Beck and **K. Messlinger**	Release of immunoreactive substance P in the trigeminal brain stem nuclear complex evoked by chemical stimulation of the nasal mucosa and the dura mater encephali—a study with antibody microprobes	273
S. C. Ahlgren, J.-F. Wang and **J. D. Levine**	C-fiber mechanical stimulus–response functions are different in inflammatory versus neuropathic hyperalgesia in the rat	285
M. Narita, M. Ohsawa, H. Mizoguchi, J. Kamei and **L. F. Tseng**	Pretreatment with protein kinase C activator phorbol 12, 13-dibutyrate attenuates the antinociception induced by μ- but not ε-opioid receptor agonist in the mouse	291
H. Kashiba, Y. Ueda and **E. Senba**	Systemic capsaicin in the adult rat differentially affects gene expression for neuropeptides and neurotrophin receptors in primary sensory neurons	299
C. D. Vargas, E. Volchan, J. N. Hokoç, A. Pereira, R. F. Bernardes and **C. E. Rocha-Miranda**	On the functional anatomy of the nucleus of the optic tract–dorsal terminal nucleus commissural connection in the opossum (*Didelphis marsupialis aurita*)	313
EDITORIAL ANNOUNCEMENT		I

VOLUME 76 NUMBER 2

LETTERS TO NEUROSCIENCE

M. S. Duxon, T. P. Flanigan, A. C. Reavley, G. S. Baxter, T. P. Blackburn and **K. C. F. Fone**	Evidence for expression of the 5-hydroxytryptamine-2B receptor protein in the rat central nervous system	323
I. Vathy, J. Sokol and **A. M. Etgen**	Gender-related differences exist in cortical [^{3}H]nisoxetine binding and are not affected by prenatal morphine exposure	331

COMMENTARY

R. Levy, L.-N. Hazrati, M.-T. Herrero, M. Vila, O.-K. Hassani, M. Mouroux, M. Ruberg, H. Asensi, Y. Agid, J. Féger, J. A. Obeso, A. Parent and **E. C. Hirsch**	Re-evaluation of the functional anatomy of the basal ganglia in normal and parkinsonian states	335

RESEARCH PAPERS

S. Kaur and **M. S. Starr**	Differential effects of intrastriatal and intranigral injections of glutamate antagonists on motor behaviour in the reserpine-treated rat	345
M. Bredenkötter and **K. Braun**	Changes of neuronal responsiveness in the mediorostral neostriatum/hyperstriatum after auditory filial imprinting in the domestic chick	355
R. D'Hooge, G. Nagels, F. Franck, C. E. Bakker, E. Reyniers, K. Storm, R. F. Kooy, B. A. Oostra, P. J. Willems and **P. P. De Deyn**	Mildly impaired water maze performance in male *Fmr1* knockout mice	367
Zs. Maglóczky, P. Halász, J. Vajda, S. Czirják and **T. F. Freund**	Loss of Calbindin-D_{28K} immunoreactivity from dentate granule cells in human temporal lobe epilepsy	377
C. A. Doyle and **P. Slater**	Localization of neuronal and endothelial nitric oxide synthase isoforms in human hippocampus	387
J. D. E. Barks, X.-H. Liu, R. Sun and **F. S. Silverstein**	gp120, a human immunodeficiency virus-1 coat protein, augments excitotoxic hippocampal injury in perinatal rats	397
T. Sakaguchi, M. Okada, M. Kuno and **K. Kawasaki**	Dual mode of *N*-methyl-D-aspartate-induced neuronal death in hippocampal slice cultures in relation to *N*-methyl-D-aspartate receptor properties	411
M. Marcinkiewicz, T. Nagao, R. Day, N. G. Seidah, M. Chrétien and **M. Avoli**	Pilocarpine-induced seizures are accompanied by a transient elevation in the messenger RNA expression of the prohormone convertase PC1 in rat hippocampus: comparison with nerve growth factor and brain-derived neurotrophic factor expression	425
T. Olsson, Å. Håkansson and **J. R. Seckl**	Ketanserin selectively blocks acute stress-induced changes in NGFI-A and mineralocorticoid receptor gene expression in hippocampal neurons	441
D. Schmitz, R. M. Empson, T. Gloveli and **U. Heinemann**	Serotonin blocks different patterns of low Mg^{2+}-induced epileptiform activity in rat entorhinal cortex, but not hippocampus	449
Y. Nakamura, K. Tsuji, M. Shuto, K. Ogita, Y. Yoneda, K. Shimamoto, T. Shibata and **K. Kataoka**	Protection by diphenyliodonium against glutamate neurotoxicity due to blocking of *N*-methyl-D-aspartate receptors	459
P. Bouchard and **R. Quirion**	[^{3}H]1,3-di(2-tolyl)guanidine and [^{3}H](+)pentazocine binding sites in the rat brain: autoradiographic visualization of the putative $sigma_1$ and $sigma_2$ receptor subtypes	467
B. Búzás and **B. M. Cox**	Quantitative analysis of mu and delta opioid receptor gene expression in rat brain and peripheral ganglia using competitive polymerase chain reaction	479
A.-C. Ericson, A. D. Craig and **A. Blomqvist**	GABA-like immunoreactivity in the thalamic nucleus submedius of the cat	491
S. De Biasi, A. Amadeo, P. Arcelli, C. Frassoni and **R. Spreafico**	Postnatal development of GABA-immunoreactive teminals in the reticular and ventrobasal nuclei of the rat thalamus: a light and electron microscopic study	503
S. X. Simonian and **A. E. Herbison**	Differential expression of estrogen receptor and neuropeptide Y by brainstem A1 and A2 noradrenaline neurons	517
I. A. Shevelev and **E. N. Tsicalov**	Fast thermal waves spreading over the cerebral cortex	531
K. J. Maloney, E. G. Cape, J. Gotman and **B. E. Jones**	High-frequency gamma electroencephalogram activity in association with sleep–wake states and spontaneous behaviors in the rat	541
T.-N. Lin, Y.-P. Wong, J. J. Chen, J. T. Cheng, S.-F. Yu, S. H. Sun, S.-I. Chi and **C.-Y. Chai**	Elevated basic fibroblast growth factor levels in stroke-prone spontaneously hypertensive rats	557

T. Kitahara, N. Takeda, T. Saika, T. Kubo and H. Kiyama — Role of the flocculus in the development of vestibular compensation: immunohistochemical studies with retrograde tracing and flocculectomy using Fos expression as a marker in the rat brainstem — 571

N. A. Cohen, W. E. Kaufmann, P. F. Worley and F. Rupp — Expression of agrin in the developing and adult rat brain — 581

M. Suzuki, Y. Yamazaki, N. Mizuno and K. Matsunami — Trajectory formation of the center-of-mass of the arm during reaching movements — 597

V. L. Cherkassky — After-effects of preceding movement on dynamic responses of spindle primary afferents during passive muscle lengthening in the cat — 611

W. A. A. Kunze, P. P. Bertrand, J. B. Furness and J. C. Bornstein — Influence of the mucosa on the excitability of myenteric neurons — 619

L. H. Schrama, G. Lepperdinger, A. Moritz, N. K. Van Den Engel, A. Marquart, A. B. Oestreicher, B. J. L. Eggen, W. J. Hage, K. Richter and O. H. J. Destrée — B-50/growth-associated protein-43, a marker of neural development in *Xenopus laevis* — 635

VOL. 76, NUMBER 3, 1997

LETTERS TO NEUROSCIENCE

E. W. G. M. Boddeke, R. Best and P. H. Boeijinga — Synchronous 20 Hz rhythmic activity in hippocampal networks induced by activation of metabotropic glutamate receptors *in vitro* — 653

S.-X. Ma, A. T. Holley, A. Sandra, M. D. Cassell and F. M. Abboud — Increased expression of nitric oxide synthase in the gracile nucleus of aged rats — 659

RESEARCH PAPERS

D. S. Chao, F. Silvagno, H. Xia, T. L. Cornwell, T. M. Lincoln and D. S. Bredt — Nitric oxide synthase and cyclic GMP-dependent protein kinase concentrated at the neuromuscular endplate — 665

Y. Yajiri, M. Yoshimura, M. Okamoto, H. Takahashi and H. Higashi — A novel slow excitatory postsynaptic current in substantia gelatinosa neurons of the rat spinal cord *in vitro* — 673

N. Gorelova and C. R. Yang — The course of neural projection from the prefrontal cortex to the nucleus accumbens in the rat — 689

G. V. Rebec, C. P. Grabner, M. Johnson, R. C. Pierce and M. T. Bardo — Transient increases in catecholaminergic activity in medial prefrontal cortex and nucleus accumbens shell during novelty — 707

F.-J. Wan and N. R. Swerdlow — The basolateral amygdala regulates sensorimotor gating of acoustic startle in the rat — 715

V. Savander, J. E. LeDoux and A. Pitkänen — Interamygdaloid projections of the basal and accessory basal nuclei of the rat amygdaloid complex — 725

C. P. Silvia, M. Jaber, G. R. King, E. H. Ellinwood and M. G. Caron — Cocaine and amphetamine elicit differential effects in rats with a unilateral injection of dopamine transporter antisense oligodeoxynucleotides — 737

N. Nakao and P. Brundin — Effects of α-phenyl-*tert*-butyl nitrone on neuronal survival and motor function following intrastriatal injections of quinolinate or 3-nitropropionic acid — 749

S. J. Augood, K. Westmore and P. C. Emson — Phenotypic characterization of neurotensin messenger RNA-expressing cells in the neuroleptic-treated rat striatum: a detailed cellular co-expression study — 763

K. Kosaka, K. Toida, F. L. Margolis and **T. Kosaka**	Chemically defined neuron groups and their subpopulations in the glomerular layer of the rat main olfactory bulb—II. Prominent differences in the intraglomerular dendritic arborization and their relationship to olfactory nerve terminals	775
M. Giustetto, P. Bovolin, A. Fasolo, M. Bonino, D. Cantino and **M. Sassoè-Pognetto**	Glutamate receptors in the olfactory bulb synaptic circuitry: heterogeneity and synaptic localization of the *N*-methyl-D-aspartate receptor subunit 1 and AMPA receptor subunit 1	787
I. Krizbai, F. Joo, A. Pestean, J. Preil, H. Botcher and **J. R. Wolff**	Localization and biochemical characterization of acid phosphatase isoforms in the olfactory system of adult rats	799
J. N. C. Kew and **M. V. Sofroniew**	Brain-derived neurotrophic factor, acidic and basic fibroblast growth factors, insulin-like growth factor-I, and various antioxidants do not prevent the apoptotic death of developing septal cholinergic neurons following nerve growth factor withdrawal *in vitro*	809
F. Baskin, Y.-P. Li, L. B. Hersh, R. M. Davis and **R. N. Rosenberg**	An AP-2 binding sequence within exon 1 of human and porcine choline acetyltransferase genes enhances transcription in neural cells	821
A. M. Kleschevnikov, M. V. Sokolov, U. Kuhnt, G. S. Dawe, J. D. Stephenson and **L. L. Voronin**	Changes in paired-pulse facilitation correlate with induction of long-term potentiation in area CA1 of rat hippocampal slices	829
T. Ibuki, A. T. Hama, X.-T. Wang, G. D. Pappas and **J. Sagen**	Loss of GABA-immunoreactivity in the spinal dorsal horn of rats with peripheral nerve injury and promotion of recovery by adrenal medullary grafts	845
L. Jasmin, E. Carstens and **A. I. Basbaum**	Interneurons presynaptic to rat tail-flick motoneurons as mapped by transneuronal transport of pseudorabies virus: few have long ascending collaterals	859
V. M. Storozhuk, A. V. Sanzharovsky and **V. V. Sachenko**	Interaction of glutamatergic and adrenergic inputs of cortical neurons during conditioning	877
M. Gruss and **K. Braun**	Distinct activation of monoaminergic pathways in chick brain in relation to auditory imprinting and stressful situations: a microdialysis study	891
A. M. Williams and **D. A. Morilak**	α_{1B} adrenoceptors in rat paraventricular nucleus overlap with, but do not mediate, the induction of c-Fos expression by osmotic or restraint stress	901
U. Windhorst, D. Kirmayer, F. Soibelman, A. Misri and **R. Rose**	Effects of neurochemically excited group III–IV muscle afferents on motoneuron afterhyperpolarization	915
P. A. Y. Ochalski, U. N. Frankenstein, E. L. Hertzberg and **J. I. Nagy**	Connexin-43 in rat spinal cord: localization in astrocytes and identification of heterotypic astro-oligodendrocytic gap junctions	931
A. D. Ansselin, D. F. Davey and **D. G. Allen**	Extracellular ATP increases intracellular calcium in cultured adult Schwann cells	947

VOLUME 76 NUMBER 4

COMMENTARY

L. Heimer, R. E. Harlan, G. F. Alheid, M. M. Garcia and **J. de Olmos**	Substantia innominata: a notion which impedes clinical–anatomical correlations in neuropsychiatric disorders	957

RESEARCH PAPERS

H. E. Savaki, V. C. Raos and **Y. Dalezios**	Spatial cortical patterns of metabolic activity in monkeys performing a visually guided reaching task with one forelimb	1007

M. T. T. Wong-Riley, M. A. Mullen, Z. Huang and **C. Guyer**	Brain cytochrome oxidase subunit complementary DNAs: isolation, subcloning, sequencing, light and electron microscopic *in situ* hybridization of transcripts, and regulation by neuronal activity	1035
D. Blacker, C. Broberger, S.-O. Ögren and **T. Hökfelt**	Cholecystokinin B receptor antagonists enhance the locomotor response to the *N*-methyl-D-aspartate antagonists phencyclidine and dizocilpine maleate	1057
V. M. Montero	C-*Fos* induction in sensory pathways of rats exploring a novel complex environment: shifts of active thalamic reticular sectors by predominant sensory cues	1069
J. M. Vargo and **J. F. Marshall**	Reduced eticlopride-induced Fos expression in caudate–putamen and globus pallidus after unilateral frontal cortex injury: relation to neglect	1083
T. Hamamura, Y. Ichimaru and **H. C. Fibiger**	Amphetamine sensitization enhances regional c-*fos* expression produced by conditioned fear	1097
M. T. Taber and **H. C. Fibiger**	Feeding-evoked dopamine release in the nucleus accumbens: regulation by glutamatergic mechanisms	1105
H. Katsuki, Y. Izumi and **C. F. Zorumski**	Removal of extracellular calcium after conditioning stimulation disrupts long-term potentiation in the CA1 region of rat hippocampal slices	1113
R. M. E. Chalmers-Redman, T. Priestley, J. A. Kemp and **A. Fine**	*In vitro* propagation and inducible differentiation of multipotential progenitor cells from human fetal brain	1121
Z. Liu and **G. L. Holmes**	Basic fibroblast growth factor is highly neuroprotective against seizure-induced long-term behavioural deficits	1129
B. Kolb, S. Cote, A. Ribeiro-Da-Silva and **A. C. Cuello**	Nerve growth factor treatment prevents dendritic atrophy and promotes recovery of function after cortical injury	1139
B. G. Gold	Axonal regeneration of sensory nerves is delayed by continuous intrathecal infusion of nerve growth factor	1153
H. Moukhles, O. Bosler, J. P. Bolam, A. Vallée, D. Umbriaco, M. Geffard and **G. Doucet**	Quantitative and morphometric data indicate precise cellular interactions between serotonin terminals and postsynaptic targets in rat substantia nigra	1159
N. Rajakumar, W. Rushlow, B. Rajakumar, C. C. G. Naus, A. J. Stoessl and **B. A. Flumerfelt**	Effects of graft-derived dopaminergic innervation on the target neurons of patch and matrix compartments of the striatum	1173
A. Bragin, J. Csicsvári, M. Penttonen and **G. Buzsáki**	Epileptic afterdischarge in the hippocampal–entorhinal system: current source density and unit studies	1187
A. K. Shetty and **D. A. Turner**	Development of long-distance efferent projections from fetal hippocampal grafts depends upon pathway specificity and graft location in kainate-lesioned adult hippocampus	1205
S. Garside, J. Woulfe and **M. F. Mazurek**	The ontogeny of NADPH-diaphorase neurons in serum-free striatal cultures parallels *in vivo* development	1221
M. R. Proctor, F. Fornai, J. K. B. Afshar and **K. Gale**	The role of nitric oxide in focally-evoked limbic seizures	1231
M.-L. Fung, Q. Huang, D. Zhou and **W. M. St. John**	The morphology and connections of neurons in the gasping centre of adult rats	1237
F. Zheng and **S. N. Lawson**	Neurokinin A in rat renal afferent neurons and in nerve fibres within smooth muscle and epithelium of rat and guinea-pig renal pelvis	1245
A. I. Kostyukov and **V. L. Cherkassky**	Interaction of the movement-dependent, extrafusal and fusimotor after-effects in the firing of the primary spindle endings	1257

AUTHOR INDEX

Abboud, F. M. 659
Afshar, J. K. B. 1231
Agid, Y. 335
Ahlgren, S. C. 285
Alheid, G. F. 957
Allen, D. G. 947
Amadeo, A. 503
Ansselin, A. D. 947
Arcelli, P. 503
Asensi, H. 335
Augood, S. J. 763
Avoli, M. 425

Bakker, C. E. 367
Bardo, M. T. 707
Barks, J. D. E. 397
Basbaum, A. I. 859
Baskin, F. 821
Baxter, G. S. 323
Beck, U. 273
Belia, S. 159
Bernardes, R. F. 313
Bertrand, P. P. 619
Best, R. 653
Billingsley, M. L. 187
Blackburn, J. R. 177
Blackburn, T. P. 323
Blacker, D. 1057
Blaha, C. D. 177
Blomqvist, A. 491
Boddeke, E. W. G. M. 653
Boeijinga, P. H. 653
Bohus, B. 63, 75
Bolam, J. P. 1159
Bonino, M. 787
Bornstein, J. C. 619
Bosler, O. 1159
Botcher, H. 799
Bouchard, P. 467
Bovolin, P. 787
Bragin, A. 1187
Braum, K. 355
Braun, K. 891
Bredenkötter, M. 355
Bredt, D. S. 665
Broberger, C. 1057
Broide, R. S. 241, 261
Brundin, P. 749
Búzás, B. 479
Buzsáki, G. 1187

Cantino, D. 787
Cape, E. G. 541
Caron, M. G. 737
Carstens, E. 859
Cassell, M. D. 659
Chai, C.-Y. 557
Chalmers-Redman, R. M. E. 1121
Chao, D. S. 665
Chapman, C. A. 177
Chen, J. J. 557
Chen, Y. 241, 261
Chen, Y. 261
Cheng, J. T. 557
Cherkassky, V. L. 611, 1257
Chi, S.-I. 557
Choi, J. 137
Chrétien, M. 425
Cohen, N. A. 581
Contreras, D. 11, 25
Cornwell, T. L. 665
Cote, S. 1139
Cotman, C. W. 137
Cox, B. M. 479
Craig, A. D. 491
Csicsvári, J. 1187
Cuello, A. C. 1139
Czirják, S. 377

Dalezios, Y. 1007
Davey, D. F. 947
Davis, R. M. 821
Dawe, G. S. 829
Day, J. R. 187
Day, R. 425
de Olmos, J. 957
de Vries, T. J. 167
De Biasi, S. 503
De Deyn, P. P. 367
Destrée, O. H. J. 635
Doucet, G. 1159
Doyle, C. A. 387
Duxon, M. S. 323
D'Hooge, R. 367

Ebersberger, A. 273
Eblen-Zajjur, A. A. 39
Eggen, B. J. L. 635
Egles, C. 203
Ellinwood, E. H. 737
Empson, R. M. 449
Emson, P. C. 7, 225, 763
Ericson, A.-C. 491
Etgen, A. M. 331

Fanò, G. 159
Fasolo, A. 787
Féger, J. 335
Félix, J. M. 203
Fernandez, A. M. 117
Fibiger, H. C. 1097, 1105
FinFine, A. 1121
Flanigan, T. P. 323
Flumerfelt, B. A. 1173
Fone, K. C. F. 323
Fornai, F. 1231
Franck, F. 367
Frankenstein, U. N. 931
Frassoni, C. 503
Freund, T. F. 377
Fulle, S. 159
Fung, M.-L. 1237
Furness, J. B. 619

Gackenheimer, S. L. 215
Gale, K. 1231
Garcia, M. M. 957
Garcia-Estrada, J. 117
Garcia-Segura, L. M. 117
Garside, S. 1221
Geffard, M. 1159
Gehlert, D. R. 215
Giustetto, M. 787
Gloveli, T. 449
Gold, B. G. 1153
Gomez-Pinilla, F. 137
Gorelova, N. 689
Gotman, J. 541
Grabner, C. P. 707
Grace, A. A. 1
Grothe, C. 123
Gruss, M. 891
Guyer, C. 1035

Hage, W. J. 635
Håkansson, Å. 441
Halász, P. 377
Hama, A. T. 845
Hamamura, T. 1097
Harlan, R. E. 957
Hassani, O.-K. 335
Hazrati, L.-N. 335
Heimer, L. 957
Heinemann, U. 449
Hensbroek, R. A. 75
Herbison, A. E. 517
Herrero, M.-T. 335
Hersh, L. B. 821
Hertenstein, A. 123
Hertzberg, E. L. 931
Higashi, H. 673
Hirsch, E. C. 335
Häkfelt, T. 1057
Hokoç, J. N. 313
Holley, A. T. 659
Holmes, G. L. 1129
Huang, Q. 1237
Huang, Z. 1035
Humphrey, P. P. A. 225

Ibuki, T. 845
Ichimaru, Y. 1097
Izumi, Y. 1113

Jaber, M. 737
Jasmin, L. 859
Johnson, M. 707
Jones, B. E. 541
Jonker, A. J. 167
Joó, F. 799

Kamei, J. 291
Kashiba, H. 299
Kataoka, K. 459
Katsuki, H. 1113
Kaufmann, W. E. 581
Kaur, S. 345
Kawasaki, K. 411
Kemp, J. A. 1121
Kenigsberg, R. L. 147
Kew, J. N. C. 809
King, G. R. 737
Kirmayer, D. 915
Kitahara, T. 571
Kiyama, H. 571
Kleschevnikov, A. M. 829
Klop, H. 167
Knoblach, S. M. 85, 97
Kolb, B. 1139
Koolhaas, J. M. 63, 75
Kooy, R. F. 367
Kosaka, K. 775
Kosaka, T. 775
Kostyukov, A. I. 1257
Krizbai, I. 799
Kubek, M. J. 85, 97
Kubo, T. 571
Kuhnt, U. 829
Kuno, M. 411
Kunze, W. A. A. 619
Kurz, H. 123

Lawson, S. N. 1245
LeDoux, J. E. 725
Lepperdinger, G. 635
Leslie, F. M. 241, 261

Levine, J. D. 285
Levy, R. 335
Li, Y.-P. 821
Lin, T.-N. 557
Lincoln, T. M. 665
Liu, X.-H. 397
Liu, Z. 1129
Luiten, P. G. M. 63, 75

Ma, S.-X. 659
Maat, H. 75
Maglózky, Zs. 377
Maloney, K. J. 541
Marcinkiewicz, M. 425
Margolis, F. L. 775
Mariggiò, M. A. 159
Marquart, A. 635
Marshall, J. F. 1083
Masuda, S. 105
Matsunami, K. 597
Mazurek, M. F. 1221
Mazzoni, I. E. 147
Meisinger, C. 123
Messlinger, K. 273
Michiels, N. H. L. M. 167
Miller, S. 137
Misri, A. 915
Mizoguchi, H. 291
Mizuno, N. 597
Montero, V. M. 1069
Morilak, D. A. 901
Morishita, E. 105
Moritz, A. 635
Moukhles, H. 1159
Mouroux, M. 335
Mulder, A. H. 167
Mullen, M. A. 1035

Nagao, M. 105
Nagao, T. 425
Nagels, G. 367
Nagy, J. I. 931
Nakamura, Y. 459
Nakao, N. 749
Narita, M. 291
Naus, C. C. G. 1173
Nestby, P. 167
Nicoletti, I. 159

Obeso, J. A. 335
Ochalski, P. A. Y. 931
Oestreicher, A. B. 635
Ogita, K. 459
Ögren, S.-O. 1057
Ohsawa, M. 291
Okada, M. 411
Okamoto, M. 673
Olsson, T. 441
Oostra, B. A. 367
O'Connell, C. 55
O'Donnell, P. 1
O'Malley, A. 55

Pappas, G. D. 845
Parent, A. 335
Patanow, C. M. 187
Penttonen, M. 1187
Peppel, P. 273
Pereira, A. 313
Pestean, A. 799
Pierce, R. C. 707
Pitkänen, A. 725
Poisbeau, P. 203
Preil, J. 799
Priestley, T. 1121
Proctor, M. R. 1231

Quirion, R. 467

Rajakumar, B. 1173
Rajakumar, N. 1173
Raos, V. C. 1007
Raymon, H. K. 241, 261
Reavley, A. C. 323
Rebec, G. V. 707
Regan, C. M. 55
René, F. 203
Reyniers, E. 367
Ribeiro-Da-Silva, A. 1139
Richter, K. 635
Rocha-Miranda, C. E. 313
Roozendaal, B. 63, 75
Rose, R. 915
Rosenberg, R. N. 821
Ruberg, M. 335
Rupp, F. 581
Rushlow, W. 1173

Sachenko, V. V. 877
Sagen, J. 845
Saika, T. 571
Sakaguchi, T. 411
Sandkühler, J. 39
Sandra, A. 659
Sanzharovsky, A. V. 877
Sasaki, R. 105
Sassoè-Pognetto, M. 787
Savaki, H. E. 1007
Savander, V. 725
Schaible, H.-G. 273
Schindler, M. 225
Schlichter, R. 203
Schmitz, D. 449
Schoffelmeer, A. N. M. 167
Schrama, L. H. 635
Seckl, J. R. 441
Seidah, N. G. 425
Sellers, L. A. 225
Senba, E. 299
Shetty, A. K. 1205
Shevelev, I. A. 531
Shibata, T. 459
Shimamoto, K. 459
Shuto, M. 459
Silvagno, F. 665
Silverstein, F. S. 397
Silvia, C. P. 737
Simonian, S. X. 517
Slater, P. 387
Sofroniew, M. V. 809
Soibelman, F. 915
Sokol, J. 331
Sokolov, M. V. 829
Spreafico, R. 503
St. John, W. M. 1237
Starr, M. S. 345
Stephenson, J. D. 829
Steriade, M. 11, 25
Stoessl, A. J. 1173
Storm, K. 367
Storozhuk, V. M. 877
Sun, R. 397
Sun, S. H. 557
Suzuki, M. 597
Swerdlow, N. R. 715

Taber, M. T. 1105
Takahashi, H. 673
Takeda, N. 571
Tjon, G. H. K. 167
Toida, K. 775
Torres-Aleman, I. 117
Tseng, L. F. 291
Tsicalov, E. N. 531
Tsuji, K. 459
Turner, D. A. 1205

Ueda, Y. 299
Umbriaco, D. 1159

Vajda, J. 377
Vallée, A. 1159
van der Zee, E. A. 63, 75
Van Den Engel, N. K. 635
Vanderschuren, L. J. M. J. 167
Vargas, C. D. 313
Vargo, J. M. 1083
Vathy, I. 331
Vila, M. 335
Volchan, E. 313
Voorn, P. 167
Voronin, L. L. 829

Wan, F.-J. 715
Wang, J.-F. 285
Wang, X.-T. 845
Westmore, K. 763
Wewetzer, K. 123
Willems, P. J. 367
Williams, A. M. 901
Windhorst, U. 915
Winzer-Serhan, U. H. 241, 261
Wolff, J. R. 799
Wong, Y.-P. 557
Wong-Riley, M. T. T. 1035
Worley, P. F. 581
Woulfe, J. 1221

Xia, H. 665
Xu, W. 7

Yajiri, Y. 673
Yamazaki, Y. 597
Yang, C. R. 689
Yasuda, Y. 105
Yeomans, J. S. 177
Yoneda, Y. 459
Yoshimura, M. 673
Yu, S.-F. 557

Zheng, F. 1245
Zhou, D. 1237
Zorumski, C. F. 1113

KEY WORD INDEX

α-adrenergic receptors, 901
μ-opioid receptor and ε-opioid receptor, 291
1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine, 335
20 Hz rhythmic activity, 653
5-HIAA, 891
5-HT_{2B} receptor, 323
6-hydroxydopamine, 1173

accumbens, 957
acetylcholine, 177
acid phosphatase, 799
active shock avoidance, 63
active shock avoidance, 75
activity dependent, 581
adrenergic receptor, 241, 261
adult rats, 299
after-effects, 1257
after-effects in afferent discharge, 611
afterhyperpolarization, 915
aging, 659
agrin immunoreactivity, 581
agrin isoforms, 581
AIDS, 397
alternative splicing, 581
AMPA, 345
AMPA receptors, 787
amphetamine, 737, 1097
amygdala, 85, 323, 725
antergrade tracing, 491
anterograde, 689
anterograde tracer, 725
anti-peptide antibodies, 225
anticonvulsant, 97
antinociception, 291
antisense oligodeoxynucleotides, 737
AP-1, 821
apoptosis, 159, 809
astrocyte, 105
astrocytosis, 117
attention, 1069
autocorrelation, 39
autoradiography, 215
avian forebrain, 355
axon growth, 1205
axonal regeneration, 1153

B-50/GAP-43, 635
basal forebrain, 957
basal forebrain cholinergic neurons, 809
basal ganglia, 1, 261, 763
basic fibroblast growth factor, 557
behaviour, 1129
behavioural test, 749
beta, 541
biotin-dextran amine, 689
brain, 215
brain damage, 1129
brain injury, 117
brain slices, 689
brainstem, 517

c-*fos*, 117, 901, 1097
CA1, 829
CA1-CA3 pyramidal neurons, 387
Ca^{2+} influx, 459
Ca^{2+} microfluorometry, 459 calcium, 411, 1113
calcium binding proteins, 377
calcium channels, 1113
calcium imaging, 947
calcium-binding proteins, 775
candate-putamen, 1
capsaicin, 299
carbachol, 177
caudate-putamen, 167
cDNA, 635
cell death, 411
cell signalling, 947
cell swelling, 411
cellular interactions, 1159
center-of-mass, 597
central nervous system, 225
central nucleus, 63, 75
cerebellum, 117, 261
cerebral cortex, 1007
cerebral lesion, 557
CGRP, 1245
chemonociception, 273
cholecystokinin, 1057
cholinergic, 147
cholinergic muscarine receptors, 653
cholingeric expression, 821
chromaffin cells, 845
chronic pain, 845
chronoamperometry, 177
climbing fibres, 117
cocaine, 737
cognition, 1069
conditioning, 75, 877
confocal laser scanning light microscopy, 775
convertases, 425
cortex, 11, 241, 1139
cortical barrels, 1069
cortical neurons, 877
corticomedial nucleus, 75
cross-correlation, 39
cyclic GMP, 665
cytochrome oxidase, 335

D2 receptor, 1083
dark neurons, 1159
DARPP-32, 749
decompensation, 571
delta, 541
dendritic arborization, 1139
dendritic spines, 55
denervation, 665
dentate gyrus, 55, 377
depotentiation, 1113
desensitization, 291
development, 581, 635
developmental isoforms, 187
diabetes mellitus, 285
diphenyleneiodonium, 459
discrimination task, 355
dizocilpine maleate (MK-801), 459
dopamine, 203, 689, 1057, 1083, 1105
dopamine neurons, 1159
dopamine transporter, 737
dopamine-β-hydroxylase, 517
dorsal crest, 55
dorsal horn, 673
dorsal root ganglion, 1153
drug reward, 707
dye coupling, 1
dynorphin, 167

electrochemistry, 177
electroencephalogram, 25
electroencephalographic activity, 653
electron microscopy, 503, 931
electron-microscopic immunocytochemistry, 787
electrophysiology, 689
emotion, 725
energy metabolism, 1035

enhancer element, 821
enkephalin, 167
enteric nervous system, 619
entopeduncular nucleus, 1173
entorhinal cortex, 449, 1187
ependymal cells, 931
epilepsy, 85, 725, 1129, 1187
epilepsy activity, 425
erythropolietin, 105
erythropolietin receptor, 105
estrogen receptor, 517
excitatory amino acid, 673
excitatory amino acids, 397
excitotoxic injury, 749
excitotoxicity, 1129
extended amygdala, 957

feeding, 1105
FGF receptor, 123, 137
FGF-2, 123, 137
field potentials, 829
fimbria-fornix, 187
Fluoro-Gold dye, 571
fragile X syndrome, 367
free radicals, 749, 809
freely behaving chicks, 355
frontal cortex, 331, 1007
functional recovery, 1139
furin, 425

GABA, 203, 313, 775
$GABA_A$ receptors, 653
GABAergic, 147
gasping, 1237
gene expression, 659, 763
gene regulation, 821, 1035
gene transcription, 821
glia, 947
glia limitans, 931
glial fibrillary acidic protein, 557
glomerulus, 775
glutamate, 345, 1057, 1083, 1105, 1231
glutamate antagonists, 397
glutamate decarboxylase, 63, 335, 1173
glutamate neurotoxicity, 105
gracile nucleus, 659
graft-host connections, 1205
granule cells, 7
group III-IV afferent, 915
growth factors, 137

haloperidol, 763
headache, 273
herpes, 859
heterologous glial coupling, 931
hippocampal grafts, 1205
hippocampus, 85, 97, 261, 377, 387, 441, 449, 829
histochemistry, 799
horizontal nystagmus, 313
HPA axis, 901
human, 597
human autopsy brain, 387
Huntington's disease, 749
HVA, 891
hyperexcitability, 377, 1205
hypothalamus, 203
hysteresis, 1257

immediate early gene, 1083
immediate-early genes, 441
immobility, 63, 75
immunocytochemistry, 75, 517, 635, 775
immunogold staining, 503
immunohistochemistry, 323, 491
in situ hybridization, 85, 241, 299, 425, 581, 635, 1173
in vivo electrophysiology, 355
in vivo voltammetry, 707
inflammation, 285
inhibition, 503, 1187
inhibitory neurons, 845
insulin-like growth factor I, 117
interaction of glutamatergic and adrenomimetic transmission in neocortex, 877
intermediate lobe of the pituitary, 203
interneurons, 1187
interstitial nucleus of the superior fasciculus (posterior fibres), 313
intestine, 619
invariance, 597
iontophoretic application, 877
ischemia, 105, 557

kainic acid, 1129
kidney, 1245

labyrinthectomy, 571
lateral terminal nucleus, 313
learning, 877
learning and memory, 355
learning behaviours, 467
limbic, 725
limbic cortex, 715
limbic system, 85, 97
locomotion, 467
locomotor sensitization, 167
long-term potentiation, 829, 1113
low Mg^{2+} induced epileptiform activity, 449
Lucifer Yellow, 1

magnesium block of NMDA receptor channel, 411
mapping, 531
medial agranular cortex, 1083
medial terminal nucleus, 313
medical septal area, 147
medulla, 1237
memory, 725
mental retardation, 367
messenger RNA, 479
metabotropic glutamate receptors, 653
microdialysis, 1105
microglia, 147
microtubules, 55
mineralocorticoid receptors, 441
mitochondria, 1035
molecular forms, 799
monocular enucleation, 1035
morphine, 331
Morris water maze, 367
motoneuron, 915
motor control, 611, 1257
mouse visual system, 1035
mRNAs, 1035
multiple system atrophy, 749
muscle, 611, 1257
muscle and spindle hysteresis, 611
muscle fatigue, 915
muscle metabolite, 915
muscle spindle, 665
muscle spindle afferents, 611
muscle spindles, 1257
mustard oil, 273
myotube, 665

Na^+/K^+ ATPase, 449
NADPH diaphorase, 659
nerve growth factor, 1153
nerve regeneration, 123
neural plasticity, 571

neural transplantation, 1121, 1205
neural transplants, 845
Neurobiotin, 1237
neuroendocrine synapse, 203
neurokinin A, 1245
neuroleptic, 763
neuroligands, 947
neuromuscular junction, 665
neuron, 105
neuronal differentiation, 147
neuronal excitability, 619
neuronal network, 39
neuronal stem cells, 7
neuropathy, 285
neuropeptide, 273
neuropeptide Y, 517
neuropeptide Y receptors, 215
neuropeptides, 299
neuroplasticity, 167
neuropsychiatric disorders, 957
neurosteroids, 467
neurotensin, 763
neurotransmitter, 225
neurotrophin receptors, 299
neurotrophins, 809
newborn, 397
NGF, 159, 1139
nicotinic acetylcholine receptors, 63
nisoxetine, 331
nitric oxide, 665, 1231
nitric oxide synthase, 387, 659
NMDA, 345, 397, 449, 673
NMDA receptor, 411
NMDA receptor antagonist, 459
NMDA receptors, 787
nociception, 491, 673, 845, 859
noradrenaline, 241, 261, 517
norepinephrine, 261, 331
NOS inhibitor, 459
nucleotides, 947
nucleus accumbens, 167, 1057, 1105
nystagmus, 571

olfactory bulb, 7, 241
olfactory marker protein, 775
olfactory receptor neurons, 787
olfactory system, 799
oligodendrocytes, 931
opioid receptors, 479
oscillations, 1187
outward rectifier, 619
oxidative stress, 809

PACE4 and PC5, 425
pain, 285, 673
paired-ulse facilitation, 829
pallidum, 335
pancreatic polypeptide, 215
Paradoxical sleep, 541
paraventricular nucleus, 901
parietal cortex, 1007
Parkinson's disease, 335, 1173
passive avoidance, 55
patch-clamp recording, 203
PC12, 159
PC2, 425
peptide YY, 215
perforant pathway, 187
phorbol ester, 291
piriform cortex, 1231
planning, 597
plasticity, 137, 799, 877, 1069
prefrontal cortex, 1057
prepulse inhibition, 715
presynaptic proteins, 187
primary afferent, 285, 673
primary afferents, 1257
programmed cell death, 809
propidium iodide, 411
prostaglandin, 285
protein kinase C, 291
protein kinase Cγ, 63
protirelin, 97
psychosis, 467, 1097
psychostimulants, 737
purinergic receptor, 947

quantitative PCR, 479

radial astrocytes, 931
rat, 177, 273, 345, 659, 787, 829, 1153
rat brain, 225, 479
reaching movement, 597
receptor autoradiography, 241
REM sleep, 541
renal pelvis, 1245
reserpine, 345
respiration, 1237
reverse transcriptase polymerase chain reaction, 787
rhythms, 25
ribosomes, 55
rotational behavior, 737

S- 100, 159
schizophrenia, 715, 1057
Schwann cells, 123
sciatic nerve, 1153
seizure, 1231
seizures, 85, 97
selective toxicity, 187
sensitization, 1097
sensorimotor cortex, 1007
sensory ganglia, 479
sensory neurons, 299, 619, 1153
sensory processing, 39
septum, 323
serotonin, 323, 441, 449
serotonin innervation, 1159
sex differences, 331
sigma receptors, 467
sleep, 11, 25
slow rhythm, 11
slow transmission, 619
Slow Wave Sleep, 541
social separation, 891
somatosensory system, 503
somatostatin, 1173
SP1, 821
spatial learning, 367
spinal cord, 491, 845
spinal ganglia, 123
spinomesencephalic tract, 859
spinothalamic tract, 859
startle, 715
stem cells, 1121
steriod receptors, 441
stomach fundus, 323
stress, 901,1097
striatum, 1083
stroke-prone spontaneously hypertensive rats, 557
substance P, 1245
substantia innominata, 957
substantia nigra, 177, 1159
substantia nigra pars reticulata, 345
subthalamic nucleus, 335
subventricular zone, 7
superior cervical ganglia, 479
synaptic circuits, 503

synaptogenesis, 1139
synchronization, 11
synchrony, 25

tail muscles, 859
temperature, 531
temporal cortex, 1007
temporal lobe epilepsy, 1205
thalamic retricular nucleus, 1069
thalamus, 11
thermal wave spreading, 531
theta, 541
theta rhythm, 653
tolerance, 291
trajectory formation, 597
transcription factors, 441
transgenic mice, 367
trauma, 137
trisynaptic pathway, 97
TTX, 891

ultrastructure, 491, 1159
urethane-anesthetized chicks, 355
uvula-nodulus, 571

ventral pallidum, 957
vesicular monoamine transporter 2, 7
viral tracing, 859
visceral afferent, 1245
visual cortex, 531, 1069
VTA, 1105

waking, 25
western blotting, 225

Xenopus laevis, 635
[^{14}C]deoxyglucose method, 1007

INTERNATIONAL BRAIN RESEARCH ORGANIZATION
World Federation of Neuroscientists
Incorporated as an independent international organization
Ottawa 1961

D. P. Purpura (U.S.A.)	*President*
M. Ito (Japan)	*Honorary President*
D. Ottoson (Sweden)	*Secretary-General*
B. A. Milner (Canada)	*Executive Secretary*
P. Strata (Italy)	*Treasurer*
S. Zeki (U.K.)	*Director, Workshop and Symposia Programme*
G. W. Kreutzberg (Germany)	*Chairman, Publications Committee*
S. H. Barondes (U.S.A.)	*Director, Fellowships Programme*
C. Blakemore (U.K.)	*Managing Editor, IBRO News*

Secretary-General
Prof. D. Ottoson
51, Bd. de Montmorency
75016 Paris
France

Executive Secretary
Prof. B. A. Milner
Montreal Neurol. Inst.
3801, University St.
Montreal, Quebec,
Canada H3A 2B4

IBRO Secretariat
Executive Director
Ms Olga Popoff
51, Bd. de Montmorency
75016 Paris
France

IBRO NEUROSCIENCE CALENDAR

The International Brain Research Organization publishes a calendar of events in the neurosciences. It is hoped that the calendar, which is published in *IBRO News*, will help scientists in the field to plan ahead for the meetings they wish to attend. The aim of the calendar is to contain as many announcements as possible of forthcoming scientific meetings in the neurosciences throughout the whole world. It is in a form suitable for mounting on a wall.

IBRO invites organizers of meetings to send information on their meetings, together with a statement as to whether the date is definite or provisional, to: Office of *IBRO News*, University Laboratory of Physiology, Parks Road, Oxford OX1 3PT, U.K.

Printed in Great Britain by Henry Ling Ltd., at the Dorset Press, Dorchester, Dorset